

CLAIMS

I claim:

1 1. An electroluminescent cable connector for mechanically
2 and electrically interconnecting a pair of electroluminescent
3 cables, each electroluminescent cable having as concentric
4 layers, a center conductor, a coating of electroluminescent
5 phosphor disposed around the center conductor, two very fine
6 outer wires wrapped around the phosphor, and at least one
7 insulating jacket covering the outer wires and phosphor, the
8 electroluminescent cable connector comprising:

9 a base defining a centrally located cavity, the cavity
10 having orifices disposed at opposite ends of the base, each of
11 the orifices being adapted for receiving an end portion of one
12 of the electroluminescent cables stripped of the insulating
13 jacket;

14 a first electrically conductive jumper element encased
15 within said base, the conductive jumper element having a pair of
16 spaced annular sleeves and a central bridging element
17 electrically and mechanically connecting the sleeves, the
18 sleeves being axially aligned with the orifices, each of the
annular sleeves being adapted for receiving an

20 electroluminescent cable with the thin outer wires of the cables
21 being folded back over the insulating jacket, whereby the
22 annular sleeve is in electrical contact with the thin outer
23 wires of the electroluminescent cable;

24 a second electrically conductive jumper element having
25 means for electrically and mechanically gripping and connecting
26 the center conductors of both of the electroluminescent cables;
27 and

28 a cap formed of insulating material disposed in and
29 covering the cavity defined by the base, the cap having a recess
30 defined therein, the second electrically conductive jumper
31 element being disposed in the recess.

1 2. The electroluminescent cable connector according to
2 claim 1, wherein said means for electrically and mechanically
3 gripping and connecting the center conductors of both said
4 electroluminescent cables comprises a pair of spaced forked
5 protrusions disposed on said second conductive jumper element,
6 the forked protrusions being adapted for piercing the phosphor
7 coating and gripping the center conductors when the cap nests
8 within the cavity defined in said base.

1 3. The electroluminescent cable connector according to
2 claim 1, further comprising a waterproof sealant securing said
3 cap within the cavity of said base.

1 4. The electroluminescent cable connector according to
2 claim 1, wherein said cap and said base are molded of
3 transparent colored plastic.

1 5. An electroluminescent cable connector for mechanically
2 and electrically interconnecting an electroluminescent cable to
3 first and second insulated wires, the electroluminescent cable
4 having a center conductor, at least one outer conductor, and at
5 least one insulating jacket, the connector comprising:

6 a base defining a centrally located cavity, the base having
7 a first end and a pair of channel passages defined in the first
8 end adapted for receiving the first and second insulated wires,
9 the base further having an opposing second end and an orifice
10 defined in the second end adapted for receiving an insulation
11 stripped portion of the electroluminescent cable;

12 a first electrically conductive element encased within said
13 base, the conductive element having an annular sleeve axially
14 aligned with said orifice, the sleeve being adapted for
15 receiving the electroluminescent cable with the outer conductor
16 folded back over the insulating jacket, the first element
17 further having an offset extension extending from the shield;

18 a cap molded of electrically insulating material disposed
19 in the cavity defined in said base, the cap having:

20 first jumper means for electrically and mechanically
21 connecting the center conductor of the electroluminescent
22 cable to the first insulated wire; and

23 second jumper means for electrically connecting the
24 offset extension to the second insulated wire.

1 6. The electroluminescent cable connector according to
2 claim 5, wherein said first jumper means comprises an elongated
3 conductive element having a pair of spaced forked protrusions
4 disposed on opposite ends of the elongated conductive element,
5 the forked protrusions being adapted for gripping the center
6 conductor of the electroluminescent cable, and for gripping and
7 making electrical contact with the first insulated wire,
8 respectively.

1 7. The electroluminescent cable connector according to
2 claim 5, wherein said second jumper means comprises a forked
3 protrusion depending from the cap, the forked protrusion being
4 adapted for gripping the second insulated wire and making
5 electrical contact with both the second insulated wire and the
6 offset extension of said first element.

1 8. An electroluminescent cable connector for mechanically
2 and electrically interconnecting an electroluminescent cable to
3 a printed circuit board, the connector comprising:

4 a base molded of electrically insulating material defining
5 a centrally located cavity having a floor, the base having an
6 end with an orifice defined therein extending into the cavity;

7 a cap disposed in and covering the cavity, the cap being
8 formed of electrically insulating material and having a recess
9 defined therein;

10 an electrically conductive element having means for
11 electrically and mechanically gripping a center conductor of the
12 electroluminescent cable, the electrically conductive element
13 being disposed in the recess defined in the cap;

14 an electrically conducting sleeve element disposed in the
15 base, the sleeve defining a cylindrical passage aligned with the
16 orifice defined in the base and terminating in a first
17 conductive terminal post extending through and depending from
18 the base, the cylindrical passage being adapted for receiving
19 the electroluminescent cable and making electrical contact with
20 outer wires of the electroluminescent cable; and

21 a second electrically conductive terminal post extending
22 from the floor and depending from the base;

23 wherein the first and second electrically conductive
24 terminal posts are adapted for attachment to the printed circuit
25 board.

1 9. The electroluminescent cable connector according to
2 claim 8, wherein said means for gripping comprises a forked
3 protrusion extending from the recess defined in said cap.